

**METHODS AND APPARATUS FOR EXTRACTION AND TRACKING OF
OBJECTS FROM MULTI-DIMENSIONAL SEQUENCE DATA**

Abstract of the Disclosure

An object tracking technique is provided which, given: (i) a potentially large data set; (ii) a set of dimensions along which the data has been ordered; and (iii) a set of functions for measuring the similarity between data elements, a set of objects are produced. Each of these objects is defined by a list of data elements. Each of the data elements on this list contains the probability that the data element is part of the object. The method produces these lists via an adaptive, knowledge-based search function which directs the search for high-probability data elements. This serves to reduce the number of data element combinations evaluated while preserving the most flexibility in defining the associations of data elements which comprise an object.

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TO SECRETARY OF THE ARMY